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SOME RADIATION SAFETY CONSIDERATIONS FOR EXPERIMENTAL AREAS

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1. The experimental areas outside fences must be safe under all beam transport and spectrometer magnet conditions. This means: magnets OFF and ON at all possible currents both direct and reversed. Safe experimental areas means that occupation areas surrounding the beams would normally have dose rates not greater than 1 mrem/hr.

2. The beam should include a safety beam plug(s), (it may be combined with collimator slits) to permit work on most, if not all, the particle detectors and as many magnets as possible without turning off the primary proton beam at the target station.

3. The beam transport magnets, access doors to beam areas and safety plug(s) shall be properly interlocked to assure personnel protection.

4. The same design methods shall be used for beam stops and collimators.

5. During beam off conditions remanent radioactivity may be a serious hazard. Isolated beam point losses of about 200 Watts on steel, for a long time (several months or longer) may leave exposure rates of 1 R/hr at 1 foot, 1 hour after shutdown.